Planning sheet – Team: **Parsley**

Week 1:

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| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Understanding the fundamental of drone flight and off center spinning mass | Show the mathematical Derivations/Equations | 4 /10 |  |
| Identify the drone specifications | Show the resources to use/control/program the drone  and being able to work with the drone | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 2:

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Deriving required equations to describe our flight system and start working on the simulation model | Show the mathematical Derivations/Equations and explain how our flight system works | 4 /10 |  |
| Hack the Drone controller (use ps4 controller for driving the drone) | Demo on controlling the drone with PS4 controller | 5/10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 3:

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| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Code the system using mathematical model | Demo of our system run in the simulation environment | 4 /10 |  |
| Find the proper material to be used for the OCSM motor and start building the prototype | Show the material picked and the progress in building the prototype | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 4:

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| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Have the OCSM prototype ready and testing it  OCSM =off center spinning mass | Show the demo on OCSM prototype | 4 /10 |  |
| Calibrate and correct the model based on the data got from running simulation | Show the modifications added to our previous mathematical modeling | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1/10 |  |
| Total |  | 10/10 | /10 |

Week 5:

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Derive the right controller model to implement on the drone | Show and explain the derived model | 4 /10 |  |
| Continue on OCSM module which will be attached to our drone | Demo on prepared and built OCSM module | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 6:

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| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Improve the controller model based on data collected and simulation data | Show and describe the controller model improvements | 3/10 |  |
| Implement the sensor fusion adding our required sensors or using the sensors on the drone | Do a live demo with drone and show the collected data from the sensors on the drone | 3/10 |  |
| Start designing controller circuit | Show the schematics and board file | 3/10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 7:

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Testing the model with drone+OCSM module attached (1) | Share the test results and outputs | 4/10 |  |
| Finish the controller circuit | Show and explain the prepared finished board | 5/10 |  |
| Documentation | Show the recorded progress and write up | 1/10 |  |
| Total |  | 10/10 | /10 |

Week 8:

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Testing the model with drone+OCSM module attached (2) | Share the test results and outputs | 4 /10 |  |
| Measure the accuracy of controller | Show data and results through demo | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 9:

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| End to end testing and final corrections | Share any change and modification to our system based on end to end testing | 4 /10 |  |
| = | Share the recorded demo | 5 /10 |  |
| Documentation | Show the recorded progress and write up | 1 /10 |  |
| Total |  | 10/10 | /10 |

Week 10:

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| --- | --- | --- | --- |
| Task | Deliverable | Score allocation | Score achieved |
| Any minor details forgotten or /not taken care | show how we fixed the errors and unexpected problems happened during the process of working on the project | 4 /10 |  |
| Final Presentation | Present our project | 2/10 |  |
| Record and add any final change to our documentation | Final paper on our project results | 4/10 |  |
| Total |  | 10/10 | /10 |